

ened. It must be that the ♀ ♀ are impregnated at this time, and that in the middle of June, as I have already observed, the viviporous young are hatched from the body of the parent. I do not see that the presence of this *Stylops* necessarily kills the bee or wasp, unless there are five or six individuals within the same bee-body."

The following papers were presented for publication:—

“ Descriptions of several new N. A. Coleoptera, by Jas. H. B. Bland.”

“ Descriptions of N. American Lepidoptera, No. 3, by Aug. R. Grote.”

“ List of a Collection of Lepidoptera Heterocera, taken near Williamstown, Mass., by Aug. R. Grote.”

“ Synopsis of the Bombycidae of the U. States, by A. S. Packard, Jr.”

“ Descriptions of North American Hymenoptera, by E. T. Cresson.”

And were referred to Committees.

On report of the respective Committees, the following papers were ordered to be printed.

Description of several new North American CTENOPHORÆ.

BY BARON R. OSTEN SACKEN.

Five species were enumerated in my *Catalogue of the described diptera of North America*, under the head of *Ctenophora*. Subsequent investigations have proved that two of them, *C. fuliginosa* Say, and *C. abdominalis* Say, are true Tipulæ. *C. Parrii* Kirby, seems also to be a *Tipula*. The two remaining species *C. dorsalis* Walker, and *C. succedens* Walker, may perhaps be identified with two of the new species described below, although this identification, as will be shown, is by no means certain.

1. *Antennæ of the male with four rows of branches, the two larger ones on the outside, the two smaller ones on the inside; antennæ of the female rather short, serrated; male genitals clavate, but of moderate size; female ovipositor short.*

C. nubecula n. sp. ♂ ♀.

Flavo-ferruginea, thorace ex maxima parte flavo, vittâ mediâ fuscâ, cuneiformi; alis subhyalinis, stigmata flavo, nebula substigmatica majori, fuscâ.

Ferruginous-yellowish, thorax for the most part yellow, with a cuneiform, brown intermediate stripe; wings almost hyaline, stigma yellow, a rather large brown cloud close behind the stigma.

Long. corp. ♂ 0.55, ♀ 0.8; long al. ♂ 0.55, ♀ 0.62.

Head yellow, palpi yellowish, brownish towards the tip: front above the antennæ yellow; a black, triangular spot occupies the remainder of the front and the vertex. Thorax more or less tinged with bright lemon-yellow on the anterior part of the prothorax above and on the pleuræ: intermediate stripe brownish-black, triangular; lateral stripes brownish, very much abbreviated anteriorly. Halteres yellowish-ferruginous with a more or less distinct trace of lemon-yellow on the knob. Feet ferruginous; coxæ more or less tinged with lemon-yellow; anterior half of the femora somewhat paler than the posterior one (especially in the male). Tarsi dark tawny, two last joints blackish: in the female, the basal joints of the tarsi are lighter ferruginous. Abdomen brownish-ferruginous, with a more or less distinct, narrow, black dorsal stripe, generally interrupted at the incisures of the segments; posterior corners of the intermediate segments, on the back, as well as on the venter, more or less tinged with lemon-yellow. Wings subhyaline, a yellowish tinge along the anterior margin, which reaches as far as the stigma; a similar tinge along the fifth longitudinal vein; stigma yolk-yellow; a large brown cloud behind it, which on one side has a definite limit, formed by the cross-veins between the stigma and the discal cell; on the other side (towards the apex) there is no such limit, and the brown fades away gradually; this cloud does not touch the costal margin, so that there is a small hyaline space left between it and the stigma; posteriorly, the cloud covers the apical half of the discal cell and does not reach beyond the hind margin of this cell.

Male. Antennæ rather long (reaching somewhat beyond the root of the wing), with four rows of branches; the inner ones about half so long as the outer ones; the three basal (branchless) joints and the flagellum, except its extreme tip, are yellowish: the branches are brownish. The male genitals are clavate, but the club is smaller than that of the species of the following section: their color is brownish-ferruginous, blackish above.

Female. Antennæ hardly reaching the root of the wings, serrated, ferruginous-yellowish; upper valves of the ovipositor very short and, beyond their broad basal portion, abruptly narrowed and almost linear; their tip is rounded.

Hab. Illinois (Mr. Walsh.)

Observation.—I have seen in Dr. Harris's Collection in Boston, two female specimens of a *Ctenophora*, which, judging by the structure of their antennæ, seem to belong to this section. I reproduce here the short description made by me, at the time when I saw them.

C. apicata n. sp. ♀.

Whole body yellowish-brown, shining; some darker spots on the vertex and thorax; abdomen also darker, with the hind margin of one or two intermediate segments yellowish. Antennæ yellowish, rather short, subpectinated or sub-moniliform. Feet brownish-yellow, apical third of the middle and of the hind femora brown; tarsi infuscated towards the tip. Wings yellowish; apical part, posterior to the discal cell, tinged with brown.

Hab. Maine; New Hampshire.

2. *Antennæ of the male with three rows of branches; the third, intermediate one, is shorter than the lateral ones; antennæ of the female elongated, subfiliform; male genitals large, clavate; female ovipositor very long, sword-shaped.*

C. fumipennis n. sp. ♂ ♀.

Nigra, alis fuliginosis: ♂ abdomine pedibusque nigris; ♀ abdomine nigro, basi ferrugineo, pedibus ferrugineis.

Black, wings smoky black: ♂ with the abdomen and feet black: ♀ abdomen black, ferruginous at the basis; feet ferruginous.

Long. corp. ♂ 0.8, ♀ 0.11: long. al. ♂ 0.65, ♀ 0.8.

Head altogether black, with black hair. Antennæ of the *male* of moderate length, with three rows of branches, the intermediate branches short: the three first joints black, flagellum brownish with whitish branches or altogether whitish. Antennæ of the *female* longer than head and thorax together, basal joints black, flagellum more or less ferruginous, extreme tips of the joints black, terminal joints more or less infuscated, the first joint of the flagellum is but little shorter than the first antennal joint, the following joints of the flagellum gradually decrease in length: the four or five penultimate joints are subelliptical and of about equal length. The whole thorax black, shining: a whitish spot on the posterior end of the membrane between the collare and the root of the wings. Halteres with a blackish stem and a dingy whitish knob, or altogether blackish: abdomen of the *male* altogether black with large, club-shaped genitals; abdomen of the *female* black, the two basal segments ferruginous: the latter half of the abdomen is tapering and ends in a long, sword-shaped ovipositor. Feet of the *male* black, the foremost pair rather brownish: the foremost tarsi livid-brownish from the tip of the first to the base of the fourth joint: feet of the *female* ferruginous, coxæ and trochanters black: tarsi brownish, except the first and the root of the second joint, which are ferruginous. Wings uniformly brownish ferruginous, with a dark brown stigma. The second and third longitudinal veins are nearly parallel, only very slightly diverging towards their tip.

Hab. Virginia (Dr. Wilson.)

Observation.—One of the male specimens seen by me in the Cabinet of the Entomological Society in Philadelphia, has the basal two-thirds of the wings almost hyaline, and the apical third is less brownish than in the other specimens. There is also a small hyaline spot beyond the stigma. It is evidently only a variety.

C. topazina n. sp. ♂ ♀.

Nigra, vel ferruginea; abdomine plerumque flavo-ferrugineo, vittâ nigrâ: thorace vittâ laterali flavâ, pedibus ferrugineis; alis flavescentibus, stigmatе fusco.

Black, or ferruginous; abdomen generally yellowish-ferruginous with a black stripe; feet ferruginous; wings tinged with yellow; stigma dark brown.

Long. corp. ♂ 0.7–0.75, ♀ 0.9–0.10; long. al. ♂ 0.65.

The coloring of the body is usually black, mixed with ferruginous, so that the black prevails on the thorax, the ferruginous on the abdomen, which, in most specimens, has a black, more or less extended, dorsal stripe. Among five males one had a black abdomen, the hind margins of the segments tinged with yellowish and some ferruginous spots on the sides of the two first, on the two last segments and on the club. When the thorax is black, there is a perceptible dull tawny spot above the middle coxæ and a dull reddish spot on each side of the metathorax. In some specimens, the reddish color prevails on the thorax so as to leave only three broad, black, shining stripes on its back. The only female which I have seen, had a ferruginous thorax, with the exception of dark spots on the pleuræ.

Antennæ of the *male* black at the base, flagellum grayish-brown in some specimens, yellowish-white in others, with three rows of branches, the intermediate one being the shortest. Antennæ of the *female* longer than head and thorax together; three first joints brownish, the following ferruginous, more or less tipped with brown; the proportion between the length of the joints is the same as in the female of *C. fumipennis*. On the thorax, the membrane between the root of the wing and the collare is bright yellow; the pleuræ have a slight grayish down. Halteres yellowish, their stem sometimes infuscated. Male genitals large, clavate; female ovipositor long, sword-shaped. Femora ferruginous, dark brown at the tip; fore tibiæ dark tawny, still darker towards the tip; middle and hind tibiæ ferruginous-tawny, darker at the basis and gradually infuscated towards the tip. Tarsi dark brown, the tip of the first joint and the three following joints of the foremost ones are pale grayish brown. (The only female specimen had altogether ferruginous feet, except the tarsi, which were brown, from the tip of the first joint.) Wings with a somewhat topazine yellowish tinge; veins brown; the interval between the costa and the first longitudinal vein more saturate yellow; stigma dark brown: its anterior portion sometimes paler; one of the males had a rather indistinct small grayish cloud, occupying the latter two-thirds of the discal cell and somewhat encroaching upon its surroundings; the extreme apex of the wing is also slightly margined with gray; the second and third longitudinal veins are nearly parallel and the distance between their tips is somewhat shorter than the distance between the tips of the third and of the following veins.

Hab. Virginia (Dr. Wilson.)

Observation.—I would take this species for *C. dorsalis* Walker, if it was not for the words: *feelers having alternate rows of long and short branches on each side*, which place Mr. Walker's species in the first section.

C. frontalis n. sp. ♂.

Ferruginea, capite nigro, abdominis segmentis 2-8 superne nigricantibus, alis hyalinis, stigmatibus fuscis.

Ferruginous, head black, the segments 2-8 of the abdomen blackish above; wings altogether hyaline; stigma brown.

Long. corp. ♂ 0.6; long. al. 0.5.

Head black, mouth brownish, palpi brownish-yellow, their tip black; antennæ pale ferruginous; branches brownish gray, in three rows, the intermediate row being the shortest. Thorax ferruginous, shining above; hardly any vestiges of stripes are perceptible; the membrane between the root of the wings and the collare dingy-yellow. Halteres yellow. Feet pale ferruginous; tips of the femora slightly brownish; the extreme tips of the tibiæ, including the spurs, brown; tarsi pale brownish, the extreme tips of the 3d and 4th joints are brown; last joint dark brown. (The foremost feet are wanting in my only specimen.) Abdomen ferruginous, a black dorsal stripe of rather indefinite outline, begins at the second segment and ends at the base of the large, club-shaped male genitals, which are entirely ferruginous; this stripe occupies however only the middle of the dorsal segments, the sides of which are ferruginous. Wings altogether hyaline, even the space between the costa and the first longitudinal veins is without any tinge; veins yellow at the basis of the wings, black on the remainder of their surface; stigma brown; the 2d and 3d veins are distinctly diverging towards their tips, so that the distance between these tips is somewhat larger than that between the tip of the 3d longitudinal and of the following vein.

Hab. Massachusetts (Sanborn).

Observation I.—I possess an imperfect specimen of a female, which may belong to this species. Although the body is differently colored, the hyaline wings, yellowish at the basis, and the direction of the 2d and 3d longitudinal veins afford strong points of analogy. I incline to believe that *C. frontalis*, like *C. topazina*, varies in its coloring from black to ferruginous. I let the description of this female follow:

Head and thorax black, shining; palpi tawny at the base, the last joints black; antennæ brown; first joint black above; the third joint (first joint of the flagellum) is about half the length of the first, incrassated towards the tip on its upper side and therefore, clavate; fourth joint linear, somewhat longer than the third; the fifth joint also linear, about $\frac{2}{3}$ of the fourth; the 6th still shorter; the 7th and the following are subelliptical, the three penultimate joints subglobular. The membrane between the root of the wings and the collare is yellow. Halteres yellow. Fore coxæ black, clothed with pale hairs, their extreme tip and the trochanters ferruginous; middle and hind coxæ pale ferruginous, black at the extreme basis; femora ferruginous, the extreme tip brownish above; tibiæ dark tawny, paler on the inside; foremost tarsi dark brown; the first joint and the extreme basis of the second joint pale brownish. (The other tarsi, as well as the abdomen, are wanting.) Wings as in the male.

Hab. Ohio (Capt. Holden.)

Observation II.—It is not impossible that this is *C. succedens* Walk., although the description of this species in the *Diptera Saundersiana* is too unmeaning to admit of any conclusion, the more so, as Walker describes only the female.